

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for imaging an optical code comprising the steps of:
consecutively imaging an optical code ~~respectively~~ using at least a first and a second imaging setting, respectively;
generating at least first and second sets of pixel image data ~~respectively~~ corresponding, respectively, to the consecutive imaging using the first and second imaging settings;
evaluating at least one of the first and second sets of pixel image data after the consecutive imaging and prior to performing a decode attempt on the first and second sets of pixel image data;
selecting at least one of the first and second sets of pixel image data in accordance with the evaluation; and
decoding pixel image data from the selected set of pixel image data that corresponds to the optical code.

2. (Original) The method according to Claim 1, wherein the step of consecutively imaging includes the step of imaging using the second imaging setting immediately after imaging using the first imaging setting.

3. (Currently Amended) The method according to Claim 1, further comprising the steps of:

evaluating a decodability quality of the first set of pixel image data; and

configuring the second imaging setting according to the evaluation results.

4. (Original) The method according to Claim 1, wherein the first and second imaging settings each include at least one of a focus point setting, an illumination level setting, a signal gain setting, and an exposure setting.

5. (Original) The method according to Claim 1, wherein the evaluating step includes evaluating a decodability quality of at least one of the first and second sets of pixel image data.

6. (Currently Amended) The method according to Claim 1, wherein the evaluation step includes evaluating a portion of the first set of pixel image data and a portion of the second set of pixel image data that is complementary to the portion of the first set of pixel image data.

7. (Original) The method according to Claim 1, wherein the first imaging setting includes a first focal point setting, and the second imaging setting includes a second focal point setting, wherein the first and second focal point settings are different.

8. (Currently Amended) The method according to Claim 1, wherein the selecting step includes the steps of:

comparing evaluation results corresponding to the first and second sets of pixel image data; and
selecting at least one of the first and second sets of pixel image data in accordance with the comparison.

9. (Currently Amended) The method according to Claim 1, wherein: the evaluating step includes evaluating only one set of pixel image data and determining if results of the evaluation satisfy a predetermined condition; the selecting step includes selecting the evaluated set of pixel image data if the results of the evaluation satisfy the predetermined condition, and further comprising the steps of:

evaluating the other set of pixel image data if the results of the evaluation do not satisfy the predetermined condition and comparing the evaluation results corresponding to the first and second sets of pixel image data; and
selecting at least one of the first and second sets of pixel image data in accordance with the comparison.

10. (Cancelled)

11. (Currently Amended) The method according to Claim 1, wherein the evaluating step includes the steps of:

locating pixel image data in at least one of the respective first and second sets of pixel image data that corresponds to at least a portion of the optical code; and

evaluating the respective located data.

12. (Currently Amended) The method according to Claim 1, wherein a location of an optical code in the pixel image data in one of the first and second sets of pixel image data is used to locate pixel image data that corresponds to at least a portion of the optical code in the other set of pixel image data.

13. (Currently Amended) The method according to Claim 1, further comprising the step of receiving at least one of the first and second sets of pixel image data while performing the evaluating step.

14. (Currently Amended) A system for imaging an optical code comprising:

means for consecutively imaging an optical code ~~respectively~~ using at least a first and a second imaging setting, respectively;

means for generating at least first and second sets of pixel image data respectively corresponding, respectively, to the consecutive imaging using the first and second imaging settings;

means for evaluating at least one of the first and second sets of pixel image data after the consecutive imaging and prior to performing a decode attempt on the first and second sets of pixel image data;

means for selecting at least one of the first and second sets of pixel image data in accordance with the evaluation; and

means for decoding pixel image data from included in the selected set of pixel image data that corresponds to the optical code.

15. (Original) The system according to Claim 14, wherein the means for consecutively imaging includes means for imaging using the second imaging setting immediately after imaging using the first imaging setting.

16. (Currently Amended) The system according to Claim 14, further comprising:

means for evaluating a decodability quality of the first set of pixel image data; and

means for configuring the second imaging setting according to the evaluation results.

17. (Original) The system according to Claim 14, wherein the first and second imaging settings each include at least one of a focus point setting, an illumination level setting, a signal gain setting, and an exposure setting.

18. (Currently Amended) The system according to Claim 14, wherein the means for evaluating includes means for evaluating a decodability quality of at least one of the first and second sets of pixel image data.

19. (Currently Amended) The system according to Claim 14, wherein the means for evaluation includes means for evaluating a portion of the first set of pixel image data and a portion of the second set of pixel image data that is complementary to the portion of the first set of pixel image data.

20. (Original) The system according to Claim 14, wherein the first imaging setting includes a first focal point setting, and the second imaging setting includes a second focal point setting, wherein the first and second focal point settings are different.

21. (Currently Amended) The system according to Claim 14, wherein the means for selecting includes:

means for comparing evaluation results corresponding to the first and second sets of pixel image data; and
means for selecting at least one of the first and second sets of pixel image data in accordance with the comparison.

22. (Currently Amended) The system according to Claim 14, wherein the means for evaluating and the means for selecting collectively comprise at least

one processor for performing the steps of: evaluating only one set of pixel image data and determining if results of the evaluation satisfy a predetermined condition;

selecting the evaluated set of pixel image data if the results of the evaluation satisfy the redetermined condition;

evaluating the other set of pixel image data if the results of the evaluation do not satisfy the predetermined condition and comparing the evaluation results corresponding to the first and second sets of pixel image data; and

selecting one of the first and second sets of pixel image data in accordance with the comparison.

23. (Cancelled)

24. (Currently Amended) The system according to Claim 14, wherein the means for evaluating includes:

means for locating pixel image data in at least one of the respective first and second sets of pixel image data that corresponds to at least a portion of the optical code; and

means for evaluating the respective located data.

25. (Currently Amended) The system according to Claim 14, wherein a location of an optical code in the pixel image data in one of the first and second

sets of pixel image data is used to locate pixel image data that corresponds to at least a portion of the optical code in the other set of pixel image data.

26. (Currently Amended) The system according to Claim 14, wherein the means for evaluating receives at least one of the first and second sets of pixel image data is being received while the means for evaluating evaluates.

27. (Currently Amended) An optical code reading system comprising: an imaging engine having a lens assembly and a photo sensor array for consecutively imaging an optical code located in a field of view of the imaging engine ~~respectively~~ using at least a first and a second imaging setting, respectively, and generating at least first and second sets of pixel image data ~~respectively corresponding, respectively, to the consecutive imaging using the~~ first and second imaging settings;

processing means for evaluating at least one of the first and second sets of pixel image data after the consecutive imaging, and selecting at least one of the first and second sets of pixel image data in accordance with the evaluation prior to performing a decode attempt on the first and second sets of pixel image data; and processing means for decoding pixel image data from the selected set of pixel image data that corresponds to the optical code.

28. (Currently Amended) The optical code reading system according to Claim 27, wherein the processing means further configures the second imaging setting in accordance with evaluation of the first set of pixel image data.

29. (Original) The optical code reading system according to Claim 28, wherein the imaging engine further includes at least one of an illuminator assembly, a shutter assembly, signal processing circuitry, an illuminator control assembly for controlling the illuminator assembly, an exposure control assembly for controlling the shutter assembly, signal processing control circuitry for controlling the signal processing circuitry, and a focus control assembly for controlling the lens assembly; and

wherein the processing means generates control signals in accordance with the second image setting for controlling at least one of the illuminator control assembly, the exposure control assembly, the signal processing control circuitry, and the focus control assembly.

30. (Currently Amended) The optical code reading system according to Claim 27, wherein the processing means evaluates a portion of the first set of pixel image data and a portion of the second set of pixel image data that is complementary to the portion of the first set of pixel image data.

31. (Cancelled)

32. (Currently Amended) A method for imaging an optical code comprising the steps of:

consecutively imaging said optical code ~~respectively~~ using at least a first and a second imaging setting, respectively;

generating at least first and second sets of pixel image data ~~respectively~~ corresponding, respectively, to the consecutive imaging using the first and second imaging settings; and

transmitting the first and second sets of pixel image data to an external processor for processing of the pixel image data, wherein the external processor processes the first and second sets of pixel image data in accordance with a processing method comprising the steps of:

evaluating at least one of the first and second sets of pixel image data after the consecutive imaging and prior to performing a decode attempt on the first and second sets of pixel image data;

selecting at least one of the first and second sets of pixel image data in accordance with the evaluation; and

decoding pixel image data from the selected set of pixel image data that corresponds to the optical code.

33. (Currently Amended) A computer readable medium storing programmable instructions capable of being executed by a processor for performing the steps of:

receiving at least first and second sets of pixel image data corresponding, respectively, to consecutive imaging of an optical code using respective at least first and second image settings;

evaluating at least one of the first and second sets of pixel image data after the consecutive imaging and prior to performing a decode attempt on the first and second sets of pixel image data;

selecting at least one of the first and second sets of pixel image data in accordance with the evaluation; and

decoding pixel image data from the selected set of pixel image data that corresponds to the optical code.

34. (Currently Amended) A computer data signal embodied in a transmission medium for execution by at least one processor for processing an imaged optical code, the data signal comprising:

a code segment including instructions for receiving at least first and second sets of pixel image data corresponding, respectively, to consecutive imaging of an optical code using respective at least first and second image settings;

a code segment including instructions for evaluating at least one of the first and second sets of pixel image data after the consecutive imaging and prior to performing a decode attempt on the first and second sets of pixel image data;

a code segment including instructions for selecting at least one of the first and second sets of pixel image data in accordance with the evaluation; and

a code segment including instructions for decoding pixel image data from the selected set of pixel image data that corresponds to the optical code.